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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,119	06/16/2005	Eric Nichol Meyer	0446-0172PUS1	3287
2292	7590	04/17/2007	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			BELLAMY, TAMIKO D	
			ART UNIT	PAPER NUMBER
			2856	
SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE		DELIVERY MODE	
3 MONTHS	04/17/2007		ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/17/2007.

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mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)
	10/509,119	MEYER ET AL.
Examiner	Art Unit	
Tamiko D. Bellamy	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 January 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3,4 and 8-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3,4 and 8-37 is/are rejected.
- 7) Claim(s) 20-25 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 January 2007 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Drawings

1. The drawings were received on 1/17/07. These drawings are accepted.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 8-16, 18, and 26, and 29-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abouav (4,860,653) in view of Dixon et al. (4,782,911).

Re claim 1, as depicted in fig. 2, Abouav discloses a detonator (6) in a detonator hole (e.g., charge holes 4). Abouav discloses a blast control signal path (e.g., wire 20) extending between a blast controller (14) and the detonator (6). Abouav lacks the detail of utilizing a blast feature signal communication path extending from at least one detonator hole region, and at least one sensor connected to one of a main conductor arrangement and any respective conductor arrangements. As depicted in fig. 1, Dixon et al. discloses utilizing a blast feature signal communication path (e.g., conductor wire 12) extending from at least one detonator hole region, and at least one sensor (11) connected to one of a main conductor arrangement (12) and any respective conductor arrangements (12). Therefore, to modify Abouav by employing blast feature signal path, and one sensor connected to a main conductor arrangement and a respective conductive arrangement would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design

characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a sensor connected to a detonator via conductor arrangements and used for the sole purpose of sensing a blast feature signal.

Re claim 4, Abouav discloses a blast control signal path (e.g., wire 20) extending between a blast controller (14) and the detonator (6). Abouav lacks the detail of a blast feature monitoring station and a controller are provided at common location which remote from a blast site. As depicted in fig. 1, Dixon et al. discloses a blast feature monitoring station (e.g., combination of sensing device (11) and recorder (14)) and a controller (e.g., electric generator 10) remote from a blast site. Therefore, to modify Abouav by employing blast feature monitoring station and a common location as a controller would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a blasting feature monitor station used for the sole purpose of monitoring a blast feature signal transmitted from a sensor connected to a conductor arrangement.

Re claim 8, Abouav discloses a blast control signal path (e.g., wire 20) extending between a blast controller (14) and the detonator (6). Abouav lacks the detail of a sensor located outside of any detonating housing. As depicted in fig. 1, Dixon et al. discloses a sensor (11) outside of a detonating housing (e.g. detonating casing 1). Therefore, to modify Abouav by

employing a sensor outside of a detonating housing would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a sensor located outside a detonator housing and used for the sole purpose of sensing a blast feature.

Re claim 9, as depicted in fig. 2, Abouav discloses a blast control signal path (e.g., wire 20) extending between a blast controller (14) and the detonator (6). Abouav lacks the detail of blast feature signal communication path comprising at least a main conductor arrangement. As depicted in fig. 1, Dixon et al. discloses utilizing a blast feature signal communication path (e.g., conductor wire 12) extending from at least one detonator hole region, and at least one sensor (11) connected to one of a main conductor arrangement (12) and any respective conductor arrangements (12). Therefore, to modify Abouav by employing blast feature signal path, and one sensor connected to a main conductor arrangement and a respective conductive arrangement would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a sensor connected to a detonator via conductor arrangements and used for the sole purpose of sensing a blast feature.

Re claim 10, as depicted in fig. 1, Abouav discloses a detonator (6) that is wireless connected (e.g., combination of antenna (11) and transceiver 15)) to a controller (11). Abouav lacks the detail of blast feature signal communication path comprising at least part of a conductor arrangement to which the at least one sensor is connected. As depicted in fig. 1, Dixon et al. discloses utilizing a blast feature signal communication path (e.g., conductor wire 12) extending from at least one detonator hole region, and at least one sensor (11) connected to one of a main conductor arrangement (12) and any respective conductor arrangements (12). Therefore, to modify Abouav by employing blast feature signal path, and one sensor connected to a conductor arrangement and a respective conductive arrangement would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a sensor connected to a detonator via conductor arrangements and used for the sole purpose of sensing a blast feature.

Re claim 11, as depicted in fig. 2, Abouav discloses a blast control signal path (e.g., wire 20) extending between a blast controller (14) and the detonator (6). Abouav lacks the detail of generating a monitoring signal in respective conductor arrangement and sensing a change in a blast feature monitoring parameter of the signal. Dixon et al. discloses generating a monitoring signal in respective conductor arrangement and sensing a change in a blast feature monitoring parameter (e.g., current used to determine instant generation/detonation) of the signal (Col. 1, lines 44-68; Col. 2, lines 1-18; 60-68). Therefore, to modify Abouav by employing generating a

monitoring signal in respective conductor arrangement and sensing a change in a blast feature monitoring parameter of the signal would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of generating a monitoring signal in a conductor arrangement and sensing a change in a blast feature monitoring parameter as a result of a blast.

Re claim 12, as depicted in fig. 2, Abouav discloses a blast control signal path (e.g., wire 20) extending between a blast controller (14) and the detonator (6). Abouav lacks the detail of a blast feature monitoring parameter that relates to a difference in corresponding signal parameters of a first and second signal. Dixon et al. discloses generating a monitoring signal in respective conductor arrangement and sensing a change in a blast feature monitoring parameter (e.g., current used to determine instant generation/detonation) of the signal (Col. 1, lines 44-68; Col. 2, lines 1-18; 60-68; Col. 4, lines 36-42). Therefore, to modify Abouav by employing a blast feature monitoring parameters comprising a first and second signal would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of generating a monitoring signal in a conductor arrangement and sensing a change in a blast feature monitoring parameter as a result of a blast.

Re claim 13, as depicted in fig. 2, Abouav discloses a first signal generated by a signal generator located at a remote blast controller (14) and connected to a conductor arrangement (10, 20). Abouav lacks the detail of signal generator that is also connected to a blast feature monitoring station. As depicted in fig. 1, Dixon et al. discloses a signal generator (10) connected to a conductor arrangement (12) and also connected to a blast feature monitoring station (e.g., combination of sensing device (11) and recorder (14)). Therefore, to modify Abouav by employing blast feature monitoring station and a common location as a controller would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a blasting feature monitor station used for the sole purpose of monitoring a blast feature signal transmitted from a sensor connected to a conductor arrangement.

Re claims 14 and 15, as depicted in fig. 1, Abouav discloses a first signal generated by a signal generator located at a remote blast controller (14) and is connected to a conductor arrangement (10, 20) and a wireless link (e.g., combination of antenna (11) and transceiver (15)). Abouav lacks sensor connected a blast feature monitoring station. As depicted in fig. 1, Dixon et al. discloses a signal generator (10) connected to a conductor arrangement (12) and also connected to a blast feature monitoring station (e.g., combination of sensing device (11) and recorder (14)). Therefore, to modify Abouav by employing blast feature monitoring station and a common location as a controller would have been obvious to one of ordinary skill in the art at

the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a blasting feature monitor station used for the sole purpose of monitoring a blast feature signal transmitted from a sensor connected to a conductor arrangement.

Re claim 16, as depicted in fig. 2, Abouav discloses a detonator (6) connected to a conductor arrangement (10, 20). Abouav lacks the detail of sensing a change in a blast feature monitoring parameter and processing data related to the change. Dixon et al. discloses generating a monitoring signal in a respective conductor arrangement (12) and sensing a change in a blast feature monitoring parameter (e.g., current used to determine instant generation/detonation) of the signal (Col. 1, lines 44-68; Col. 2, lines 1-18; 60-68). Therefore, to modify Abouav by employing generating a monitoring signal in respective conductor arrangement and sensing a change in a blast feature monitoring parameter of the signal would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of generating a monitoring signal in a conductor arrangement and sensing a change in a blast feature monitoring parameter as a result of a blast.

Re claim 18/16, Abouav discloses a conductor arrangement (10, 20) connected to a detonator (6) to control the detonator.

Re claims 26 and 29, as depicted in fig. 2, Abouav discloses a detonator (6) in a detonator hole (e.g., charge holes 4). Abouav discloses a blast control signal path (e.g., wire 20) extending between a blast controller (14) and the detonator (6). Abouav lacks the detail of utilizing a blast feature signal communication path extending from at least one detonator hole region, and at least one sensor located outside a housing of a detonator, and the sensor connected to the conductor arrangement. As depicted in fig. 1, Dixon et al. discloses utilizing a blast feature signal communication path (e.g., conductor wire 12) extending from at least one detonator hole region, and at least one sensor (11) located outside of the detonator housing (e.g., detonator casing 1). Therefore, to modify Abouav by employing blast feature signal path, and one sensor connected outside detector housing, and a sensor connected to the conductor arrangement would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a sensor connected to a detonator housing via conductor arrangements and used for the sole purpose of sensing a blast feature signal.

Re claim 30, as depicted in fig. 2, Abouav discloses a detonator (6) connected to a conductor arrangement (10, 20). Abouav lacks the detail of sensing a change in a blast feature monitoring parameter and processing data related to the change. Dixon et al. discloses generating a monitoring signal in a respective conductor arrangement (12) and sensing a change in a blast feature monitoring parameter (e.g., current used to determine instant generation/detonation) of the signal (Col. 1, lines 44-68; Col. 2, lines 1-18; 60-68). Therefore, to

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modify Abouav by employing generating a monitoring signal in respective conductor arrangement and sensing a change in a blast feature monitoring parameter of the signal would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of generating a monitoring signal in a conductor arrangement and sensing a change in a blast feature monitoring parameter as a result of a blast.

Re claim 31, as depicted in fig. 2, Abouav discloses a detonator (6) connected to a conductor arrangement (10, 20). Abouav lacks the detail of a sensor located outside of the detonator. As depicted in fig. 1, Dixon et al. discloses a sensor (11) located outside of the detonator housing (e.g., detonator casing 1). Therefore, to modify Abouav by employing a sensor connected outside detector housing, and a sensor connected to the conductor arrangement would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a sensor connected to a detonator housing via conductor arrangements and used for the sole purpose of sensing a blast feature signal.

Re claim 32/30, as depicted in fig. 2, Abouav discloses a signal generator connected to a conductor arrangement (10, 20).

Re claim 33, Abouav discloses a signal generator is apart on the controller (14).

Re claim 34, as depicted in fig. 2, Abouav discloses a detonator (6) connected to a conductor arrangement (10, 20). Abouav lacks the detail of a sensing circuit forming part of a blast controller. As depicted in fig. 1, Dixon et al. discloses a sensing circuit (11) forming part of a controller (e.g., generator (10)). Therefore, to modify Abouav by employing a sensing circuit would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a sensor connected to controller via conductor arrangements and used for the sole purpose of sensing a blast feature signal.

Re claim 35, as depicted in fig. 2, Abouav discloses a detonator (6) connected to a conductor arrangement (10, 20). Abouav lacks the detail of a sensor connected directly to a conductor arrangement. As depicted in fig. 1, Dixon et al. discloses a sensor (11) connected directly to a conductor arrangement (12). Therefore, to modify Abouav by employing a sensor would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a sensor connected to controller via conductor arrangements and used for the sole purpose of sensing a blast feature signal.

Re claim 36, as depicted in fig. 2, Abouav discloses a detonator (6) connected to a conductor arrangement (10, 20). Abouav lacks the detail of a sensor connected to a conductor arrangement at a point where the conductor arrangement branches from a main conductor arrangement. As depicted in fig. 1, Dixon et al. discloses a sensor (11) connected directly to a conductor arrangement and main conductor arrangement (12). Therefore, to modify Abouav by employing a sensor would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only used to provide the added limitation of a sensor connected to controller via conductor arrangements and used for the sole purpose of sensing a blast feature signal.

Re claim 37, as depicted in fig. 2, Abouav discloses a detonator (6) and a signal generator connected to a conductor arrangement (10, 20). As depicted in fig. 1, Abouav discloses a wireless link. Abouav lacks the detail of a sensor connected directly to a conductor arrangement. As depicted in fig. 1, Dixon et al. discloses a sensor (11) connected directly to a conductor arrangement (12). Therefore, to modify Abouav by employing a sensor would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of Abouav and Dixon et al. since Abouav states that his invention is applicable to detonator for blasting connected to a controller and Dixon et al. is only

used to provide the added limitation of a sensor connected to controller via conductor arrangements and used for the sole purpose of sensing a blast feature signal.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abouav (4,860,653) in view of Dixon et al. (4,782,911) as applied to claims 1, 4, 8-16, 18, 26, and 29-37 above, and further in view of Hill et al. (5,295,438).

Re claim 19, the combination of Abouav and Dixon et al. discloses a conductor arrangement comprising wire conductors. The combination of Abouav and Dixon et al. lacks the detail of the conductor arrangement comprising twisted conductors. As depicted in fig. 2, Hill et al. discloses a twisted pair of conductors (22). Therefore, to modify the combination of Abouav and Dixon et al. by employing twisted conductors would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having theses design characteristics. The skilled artisan would be motivated to combine the teachings of the combination of Abouav and Dixon et al. and Hill et al. since the combination of Abouav and Dixon et al. states that the invention is applicable to detonator for blasting connected to a controller using conducting wire and Hill et al. is only used to provide the added limitation of replacing the conducting wire with a pair of twisted conductor.

5. Claims 3 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abouav (4,860,653) in view of Dixon et al. (4,782,911) as applied to claims 1, 4, 8-16, 18, 26, and 29-37 above, and further in view of Jones (3,027,751).

Re claims 3 and 17, the combination of Abouav and Dixon et al. discloses utilizing a blast feature signal communication path (e.g., conductor wire 12) wherein the feature is an *instant time of detonation* (reg. '911, Col.1, lines 4-29). The combination of Abouav and Dixon

et al. lacks the detail of a blast feature signal wherein the feature is a velocity of detonation of a main charge initiated by a detonator. As depicted in fig. 1, Dixon et al. discloses Dixon et al. also discloses knowledge of the speed of the seismic wave through the earth. Jones discloses a velocity detonation sensor connected to a detonator via conductor wires. Therefore, to modify the combination of Abouav and Dixon et al. by employing a feature that is velocity of detonation would have been obvious to one of ordinary skill in the art at the time of the invention since Dixon et al. teaches a seismic recording device having these design characteristics. The skilled artisan would be motivated to combine the teachings of the combination of Abouav and Dixon et al. and Jones since the combination of Abouav and Dixon et al. states that the invention is applicable to detonator for blasting connected to a controller using conducting wire and Jones is only used to provide the added limitation of replacing the blasting sensor used to detect instant time of detonation of an explosive charge with a sensor that detects velocity of detonation of explosive charges.

Allowable Subject Matter

6. Claims 20-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Remarks

7. Applicant's arguments with respect to claims 1-18, and 26-37 have been considered but are moot in view of the new ground(s) of rejection. It is the examiners position that claims 1, 4, 8-16, 18, and 26, and 29-37 are not patentable over the newly applied art of Abouav (4,860,653) in view of Dixon et al. (4,782,911). Claim 19 is not patentable in view of the newly applied art

of Abouav (4,860,653) in view of Dixon et al. (4,782,911) as applied to claims 1, 4, 8-16, 18, 26, and 29-37 above, and further in view of Hill et al. (5,2,95,438). Claims 3 and 17 is not patentable in view of the newly applied art of Abouav (4,860,653) in view of Dixon et al. (4,782,911) as applied to claims 1, 4, 8-16, 18, 26, and 29-37 above, and further in view of Jones (3,027,751).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (571) 272-2190. The examiner can normally be reached on Monday - Friday 7:30 AM to 3:30 PM.

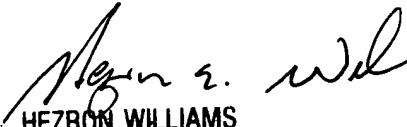
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Tamiko Bellamy

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April 10, 2007



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